3.0 MATERIALS AND METHODS

Laboratory and field testing programs were performed on aggregate base course (ABC) and subgrade materials from sites in Davidson County, North Carolina (NC). The laboratory program included performing series of tests under conditions representative of a range of compactive efforts. These tests were conducted in accordance with methods described in the American Association of State Highway and Transportation Officials (AASHTO) manual. Table 3.1 summarizes test designations used in the laboratory experimental program. Physical properties tests included sieve analysis by washing (T 11), determination of the liquid limit (T 89-96), and determination of the plastic limit and plasticity index (T 90-96). In addition to the tests shown in Table 3.1, the laboratory-prepared specimens were also penetrated with the DCP device with the PR measured for each test specimen. The field experimental program included CBR, DCP, FWD, and nuclear gage tests.

Table 3.1 AASHTO (1992) Standard Specifications Used in Laboratory Testing

AASHTO Designation	Standard Specification
T2	Aggregate Sampling
T27	Sieve Analysis of Fine and Course Aggregates
T87	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test
T99	The Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop
T180	Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18in.) Drop
T193	The California Bearing Ratio
T255	Total Moisture Content of Aggregate by Drying